REMARKS

In accordance with the foregoing, claims 2, 6, 10-11, 16 and 17 are amended. Claim 21 is presented. No new matter is presented in any of the foregoing and, accordingly, approval and entry of the amended claims and new claim are respectfully requested.

Claims 1-2, 4-6, 8-17, and 21 are pending and under consideration.

CLAIM AMENDMENTS

Claims 2, 10, and 16 are amended to respectively recite a communicating system, a computer-readable recording medium, using claim 2 as an example, including "a first receiving device receiving data from a network, the data obtained by converting a first protocol in an application protocol level of data transmitted from the client to the server into a second protocol in the application protocol level where a size of a data transfer window in a transport protocol level can be changed, the second protocol allowing a larger amount of data to be transferred at a time, and by multiplexing data of multiple connections so that a connection with a changed window size in the transport protocol level can be used continuously, and transmitted to the network by continuously using the second protocol; a demultiplexing device demultiplexing the received data; a first converting device converting a protocol of the demultiplexed data into the first protocol; a first transmitting device transmitting the data converted by said first converting device to the server."

Claims 6, 11, and 17 are amended to respectively recite a communicating system and a computer-recording medium , using claim 6 as an example, including: "a first receiving device receiving data transmitted from the client to the server; a first converting device converting a first protocol in an application protocol level of the received data into a second protocol in the application protocol level where a size of a data transfer window in a transport protocol level can be changed, the second protocol allowing a larger amount of data to be transferred at a time; a multiplexing device multiplexing data of multiple connections converted by said first converting device so that a connection with a changed window size in the transport protocol level can be used continuously; a first transmitting device transmitting data multiplexed by said multiplexing device to the network."

Support for the amendments is found for example on page 40 beginning and line 18, page 44 beginning at line 13 and illustrated in FIGs. 3 and 7.

No new matter is presented in any of the foregoing and, accordingly, approval and entry of the amended claims are respectfully requested.

REJECTION OF CLAIMS 13-14

Applicant notes that although the Office Action Summary indicates that claims 13-14 are rejected, the Detailed Action does <u>not</u> provide any support in the rejection of claims 13-14 and submit that the Office Action is incomplete.

Accordingly, Applicant requests that claims 13-14 should be allowed, or at least support for a rejection provided in a new non-final Office Action.

ITEMS 6-12: REJECTION OF CLAIMS 1, 2, 4-11, AND 15-17 UNDER 35 U.S.C. §112, SECOND PARAGRAPH

In items 6-12 of the Action, the Examiner rejects claims 1, 2, 4-11, and 15-17 under 35 U.S.C. §112, second paragraph, as being indefinite, using claim 2 as an example. (Action at pages 3-5).

In item 8, the Examiner contends the phrase "in an application protocol level" is unclear and whether it describes "the second protocol or the location of the conversion between protocols." Claims 2, 6, 10, 16, and 17, are amended herein to recite, using claim 2 as an example "converting a first protocol in an application protocol level of the received data into a second protocol in the application protocol level." Withdrawal of the rejection is requested.

In item 9, the Examiner contends the phrase "in an application protocol level where a size of a data transfer window in a transport protocol level can be changed" is unclear. The Examiner contends:

> Applicant may be referring to the transport protocol which carries the application level protocol, such as HTTP over TCP, and stating that the transport protocol has a varying window size.

Applicant submits that, regarding the phrase cited by the Examiner in item 9, claims 2, 6, 10, 16, and 17 are definite as written, and the Examiner's understanding is correct, regarding the cited phrase. Withdrawal of the rejection is requested.

In item 10, the Examiner contends the phrase "a converted window size" is unclear and questions whether a "converted window size is the same as a changed window size. Claims 2, 6, 10, 16, and 17 are amended herein to recite "a changed window size in the transport protocol level." Withdrawal of the rejection is requested. Claim 12 is also amended in a similar fashion.

Summary

Applicant submits that claims 1, 2, 4-11, and 15-17 comply with 35 U.S.C. §112, second paragraph and request withdrawal of the rejection.

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ITEMS 14-16: REJECTION OF CLAIMS 2, 6, 10, 11, 16, and 17 UNDER 35 U.S.C. §102(e) AS BEING ANTICIPATED BY SRIDHAR ET AL. (U.S.P. 6,266,701)

In items 14-16 of the Action, the Examiner rejects claims 2, 6, 10, 11, 16, and 17 under 35 U.S.C. §102(e) as being anticipated by Sridhar

As set forth in MPEP §706.02 entitled Rejection on Prior Art, anticipation requires that the reference must teach every aspect of a claimed invention. Sridhar does not support an anticipatory-type rejection by not describing features recited in the present application's independent claims

Claims 2, 10, and 16, all as amended, recite respectively a communicating system, a computer-readable recording medium, using claim 2 as an example, including "a first receiving device receiving data from a network, the data obtained by converting a first protocol in an application protocol level of data transmitted from the client to the server into a second protocol in the application protocol level where a size of a data transfer window in a transport protocol level can be changed, the second protocol allowing a larger amount of data to be transferred at a time, and by multiplexing data of multiple connections so that a connection with a changed window size in the transport protocol level can be used continuously, and transmitted to the network by continuously using the second protocol; a demultiplexing device demultiplexing the received data; a first converting device converting a protocol of the demultiplexed data into the first protocol; a first transmitting device transmitting the data converted by said first converting device to the server."

Claims 6, 11, and 17, all as amended, recite respectively a communicating system and a computer-recording medium , using claim 6 as an example, including: "a first receiving device receiving data transmitted from the client to the server; a first converting device converting a first protocol in an application protocol level of the received data into a second protocol in the application protocol level where a size of a data transfer window in a transport protocol level can be changed, the second protocol allowing a larger amount of data to be transferred at a time; a multiplexing device multiplexing data of multiple connections converted by said first converting device so that a connection with a changed window size in the transport protocol level can be used continuously; a first transmitting device transmitting data multiplexed by said multiplexing device to the network."

Sridhar does not discuss, for example, "converting a first protocol in an application protocol level of data transmitted from the client to the server into a second protocol in the application protocol level where a size of a data transfer window in a transport protocol level can

be changed."

According to an aspect of the present invention, an agent relaying device has a completely symmetric structure (see, for example, FIGs. 3 and 7). Thus, the present invention functions in a same manner for communications in either direction that are associated with a bidirectional communication held between a server and a client.

As a result, according to aspects of the present invention it is possible to improve not only a throughput associated with a data download from a server to a client, but in addition to improve a throughput associated with a data upload from the client to the server. Consequently the speed of either data-download or of data-upload is increased.

Rather Sridhar merely discusses (see, for example col. 5, lines 4-18)

> alternative transport or application layer protocols are used, rather than the protocols used by the applications, on all or a portion of the communication path joining two applications.

That is, Sridhar does not teach, and thus cannot improve, a throughput associated with data-upload from a client to a server.

Summary

Since features recited by claims 2, 6, 10-11, 16, and 17 are not discussed by the cited art, the rejection should be withdrawn and claims 2, 6, 10-11, 16, and 17 allowed.

ITEM 17: REJECTION OF CLAIM 12 UNDER 35 U.S.C. §102(e) AS BEING ANTICIPATED BY TOPOREK

In item 17 the Examiner rejects claim 12 under 35 U.S.C. §102(e) as being anticipated by Toporek. The Examiner contends that Toporek discusses "where a size of a data transfer window in a transport protocol sent within a multiplexing protocol can be changed" by citing Toporek col. 7, lines 27-28 as discussing "window sizes can be adjusted." (Action at page 6).

Applicant submits that Toporek does not discuss a "changed window size," as the Examiner contends. Rather, Toporek col. 7 lines 27-26 merely discusses:

> (t)he present protocol offers adequately large window sizes for transmission of data between the satellite gateways. Because the bandwidth-delay product over the satellite between the satellite gateways is much larger than that from the satellite gateway to the end node, the large present protocol window enables the bandwidth-delay product to window size ratio to remain relatively constant. The present gateway becomes a buffer for the network, allowing high throughput independent of the window size of the clients and servers.

That is, this discussion by Toporek teaches away from a changing window size.

In item 4, entitled Response to Arguments the Examiner contends that Toporek discusses a use of a large window. (Action at page 2). While this may *arguendo* be so, it is understood in

the art that a <u>mere use</u> of a large window does <u>not</u> teach changing a little window into a large window.

Summary

Since features recited by claim 12 are not discussed by the cited art, the rejection should be withdrawn and claim 12 allowed.

ITEM 21: REJECTION OF CLAIMS 1, 9, AND 15 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER SRIDHAR IN VIEW OF TOPOREK

In item 21, the Examiner rejects claims 1, 9, and 15 under 35 U.S.C. §103(a) as being unpatentable over Sridhar in view of Toporek.

The Action concedes that Sridhar does not teach a buffer buffering data transmitted from the server to the client and accelerating data output from the server so as to increase throughput assigned to a connection to the client by the server. However, the Examiner contends that

> Toporek teaches buffering data . . . so as to increase a throughput assigned to the connection to the client by the server (Server can get a linear increase in throughput for an increase in window size)

Applicant submits that there is no motivation to combine the art as the Examiner contends. Rather, Toporek merely discusses (Col. 17, lines 51-53):

> (t)he present system allowed the client to take advantage of the available bandwidth <u>regardless of the window size</u> of the client or server.

That is, there is no motivation to combine Sridhar with Toporek to increase a window size as the Examiner contends, since Toporek discusses <u>not having to increase</u> window size.

Summary

Since *prima facie* obviousness is not established, the rejection should be withdrawn and claims 1, 9, and 15 allowed.

ITEM 22: REJECTION OF CLAIM 4 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER SRIDHAR IN VIEW OF TOPOREK

In item 22, the Examiner rejects claim 4 as being unpatentable over Sridhar in view of Toporek.

Applicant submits there is no motivation to modify Sridhar to implement an idling device, as the Examiner contends. Sridhar merely discusses that such a device is not needed since "(r)ate control may reduce congestion at points on a communication path that data rates are reduced, thereby reducing packet loss due to overfilling buffers."

Summary

Since *prima facie* obviousness is not established, the rejection should be withdrawn

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and claim 4 allowed.

ITEMS 23-25: REJECTION OF CLAIMS 5 AND 8 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER SRIDHAR IN VIEW OF KIRKBY

In items 23-25 the Examiner rejects claims 5 and 8 under 35 U.S.C. §103(a) as being unpatentable over Sridhar in view of Kirkby. The Examiner contends that:

> (s)ince the satellite link disclosed by Sridhar provides significantly higher bandwidth than a terrestrial link, these users would be willing to pay extra to have their data sent over the satellite link. . . . it would have been obvious . . . to use a charging device to charge a service provider for bandwidth consumed by packets directed toward its' server(s). (Emphasis added)

In item 5, the Examiner contends that

> Kirkby discloses determining whether a request from a client is to be issued to the server since the service provider is charged only for data which is directed toward its' servers. . . . This requires determining if the request is to be directed as well as the client and server involved in the connection. (Emphasis added).

Applicant submits that the Examiner's contentions are without support and not as obvious to one of ordinary skill in the art. Thus, Applicant requests the Examiner provide a reference to support such contentions or that claims 5 and 8 be allowed.

Applicant also submits there is no motivation to combine the art in a manner as the Examiner contends.

Summary

Since *prima facie* obviousness is not established, the rejection should be withdrawn and claims 5 and 8 allowed.

NEW CLAIM

New claim 21 recites a method of relaying communication between a server and a client, comprising: "converting a first protocol in an application protocol level of data transmitted from the client to the server into a second protocol in the application protocol level where a size of a data transfer window in a transport protocol level can be changed, the second protocol allowing a larger amount of data to be transferred at a time." (See, for example, page 40, beginning at line 18, page 44, beginning at line 13 and FIGs. 3 and 7).

These, and other, features of claim 21 patentably distinguish over the cited art, and they are submitted to be allowable for the recitations therein.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: _October 27, 2005_   By: _____

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